

Work Order ID 77362

December-06-11 10:29:54 AM

77362

Page 1

Item ID: D350-636-012

Accept

N900040100

Setup Start *NS1*

Revision ID:

Stop *NS2*

Item Name: Skidtube RH

Start Date: 06/12/2011 Start Qty: 1.00

1

Cust Item ID:

Required Date: 20/12/2011 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals: Process Plan: MLJ Date: 11/12/06

Tooling: _____ Date: _____

Run Start *NR1*

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr	Revision Nbr
----------	--------------

D2750	F
-------	---

D3492	C
-------	---

100

0.00

100

DOCUMENT CONTROL

DC

Memo

0.00

Document Control

Photocopy blue file and type labels per PPP D350-636-012 CHG 006

8/12/01/03

77362.

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 77362***77362***

December-06-11 10:29:54 AM

Page 2

Item ID: D350-636-012

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Skidtube RH

Start Date: 06/12/2011 Start Qty: 1.00

1

Cust Item ID:

Required Date: 20/12/2011 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

110

0.00

110

Skidtubes

0.00

Skidtubes

Memo

Skidtubes

1- Pick D2600-3 Bent

2- Deburr FWD and AFT ends, remove bending marks. Scribe batch# inside AFT end per dwg D2750

3- Drill pilot holes for blade fitting bolt holes using DT8983. Open to 0.500", deburr.

4- Locate DT8329 off of blade fitting bolt holes and drill pilot holes for blade fitting

5- Drill only two fwd step holes using DT9616. Ensure proper positioning.

6- Drill pilot holes as per Dwg D2750 sheet 4 (D2750-2 details). Drill using drill Jig DT8150 & DT8863A for first side only DT8863B for second side (detail K)

7- Clecko DT8863B on second side of tube and drill pilot holes for detail B.
SECOND SIDE

8-Open up holes for Detail B to 0.375" (4 holes per side) and blade fitting location holes to 0.500" (total of 4 holes per side) as per dwg D2750. Open up holes for ground handling and detail L to 0.500" (8 holes per side)

9-Drill pilot holes for wearplates as per Dwg D2750 using DT8108 open to 0.297".

10-Open up holes of Detail A to 0.297" (total of 2 holes per side)

11/12/10

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 77362

December-06-11 10:29:54 AM

77362

Page 3

Item ID: D350-636-012

Accept

N900040100

Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Skidtube RH

Start Date: 06/12/2011 Start Qty: 1.00

1

Cust Item ID:

Required Date: 20/12/2011 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

11-Weld D2744 Cap as per Dwg D2750 and QSI 004. Fill grooves in bend left
from bending as per QSI 004

A/R Aluminum Rod batch: M118735/M117889 BE11-12-12

12-Grind welds flush as per Dwg D2750

BE 12-12-14

120

QC10- Inspect visual per QSI004- ground welds

0.00

120

QC

Memo

0.00

Quality Control

130

QC5- Inspect part completeness to step on W/O

0.00

130

QC

Memo

0.00

Quality Control

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

December-06-11 10:29:54 AM

77362

Page 4

Accept

N900040100

Setup Start *NS1*

Stop *NS2*

Item Name: Skidtube RH

Start Date: 06/12/2011 **Start Qty:** 1.00 ***1***

Cust Item ID:

Required Date: 20/12/2011 **Req'd Qty:** 1.00 *** 1 ***

Customer:

Reference:

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____

Run Start *NR1*

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

**Insp.
Stamp**

0.00

140

HandFinish

Memo

0.00

Hand Finishing

150

QC3- Inspect Part Finish

0.00

150

QC

Memo

0.00

Quality Control

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 77362

December-06-11 10:29:54 AM

77362

Page 5

Item ID: D350-636-012

Accept

N9000040100

Setup Start

NS1

Revision ID:

Stop

NS2

Item Name: Skidtube RH

Start Date: 06/12/2011 Start Qty: 1.00

1

Cust Item ID:

Required Date: 20/12/2011 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals:

Process Plan: _____

Date: _____

Tooling: _____

Date: _____

Run Start

NR1

QC: _____

Date: _____

SPC (Y/N): _____

Date: _____

Stop

NR2Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

160

0.00

160

Skidtubes

Skidtubes

Memo

0.00

1-Open up holes of Detail L and ground handling to 0.625" (total of 8 holes per side) as per dwg D2750.

2-Open up holes of Detail K to 0.750" (total of 4 holes per side) as per dwg D2750.

3-Open float holes to .500" (4 per Side)

4-Chamfer holes of Detail K, L, ground handling and float holes per dwg D2750 (welding instructions on sheet 9)

5-Deburr and blow out all chips from inside of tube

6-Prepare tube for welding, remove alodine as required.

7-Bond web D2739 in place as per QSI015

A/R Sikaflex-291

batch: 119306exp. date: 12-08-07

8- Weld spacers D3490-1, D3490-3 and D2743 as per dwg D2750 & QSI004 (welding instructions on sheet 9)

A/R Aluminum Rod

batch: M119712

9- At section AP-AP drill out x-bolt spacer to 0.404"

10-Grind welds flush as per Dwg D2750

11-Spot face ground handling holes section (total of 4 places per side) as per

ST
11-12-19

BE 11-12-20

B 11/12/21

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID: 77362

December-06-11 10:29:54 AM

77362

Page 6

Item ID: D350-636-012

Accept

N900040100Setup Start ***NS1***

Revision ID:

Item Name: Skidtube RH

Stop ***NS2***

Start Date: 06/12/2011 Start Qty: 1.00

1

Cust Item ID:

Required Date: 20/12/2011 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***


QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

dwg D2750

12-Deburr holes

 11/12/21

170

QC10- Inspect visual per QSI004- ground welds

0.00

170

QC

Memo

0.00

Quality Control

180

QC5- Inspect part completeness to step on W/O

0.00


180

QC

Memo

0.00

Quality Control

 11/12/22

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 77362

December-06-11 10:29:54 AM

77362

Page 7

Item ID: D350-636-012

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Skidtube RH

Start Date: 06/12/2011 Start Qty: 1.00

1

Cust Item ID:

Required Date: 20/12/2011 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

190

Pressure Wash per QSI005 4.3

0.00

190

HandFinish

Memo

0.00

Hand Finishing

Re-alodine tube as per QSI 005 section 4.1.2.1 do not acid etch.

Q/m-11-12-22

200

White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum

0.00

200

Powdercoat

Powder Coating

Memo

START TIME:

OVEN TEMPERATURE:

FINISH TIME:

*7:30
320 OF
8:00*

0.00

N/m-11/12/23

210

QC3- Inspect Part Finish

0.00

210

QC

Quality Control

Memo

Inspect for foreign object per QSI 024

0.00

1 BR 11-10-29

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 77362

December-06-11 10:29:54 AM

77362

Page 8

Item ID: D350-636-012

Accept

N9000040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Skidtube RH

Start Date: 06/12/2011 Start Qty: 1.00

1

Cust Item ID:

Required Date: 20/12/2011 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

230

0.00

230

HandFinishing

HandFinish

Memo

0.00

Hand Finishing

1-Install inserts as per dwg D2750

2-Inspect for Foreign Objects

3-Spray inside of tube with "LPS-3"
batch: N/A.4-Install blade fitting D3488-042, wearshoes and ground handling hardware as
per dwg D2750

SIKA FLEX 241

BATCH: 114443EXP DATE: 12.15-assemble o-ring to plug as per dwg D3492 and apply o-ring lube
A/R 55-o-ring lube batch: 1140966-Coat all exposed fasteners with "LPS Procyon"
batch: 1103481 BR 11-12-29.

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 77362

December-06-11 10:29:54 AM

77362

Page 9

Item ID: D350-636-012

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Skidtube RH

Start Date: 06/12/2011 Start Qty: 1.00

1

Cust Item ID:

Required Date: 20/12/2011 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals:

Process Plan: _____

Date: _____

Tooling: _____

Date: _____

Run Start ***NR1***

QC: _____

Date: _____

SPC (Y/N): _____

Date: _____

Stop ***NR2***Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

240

QC5- Inspect part completeness to step on W/O

0.00

240

QC

Memo

0.00

Quality Control

250

Pick Kit

0.00

250

Packaging

Memo

0.00

Packaging

260

QC4- 100% Inspect kits for completeness

0.00

260

QC

Memo

0.00

Quality Control

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 77362

December-06-11 10:29:54 AM

77362

Page 10

Item ID: D350-636-012

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Skidtube RH

Start Date: 06/12/2011 Start Qty: 1.00

1

Cust Item ID:

Required Date: 20/12/2011 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
270		0.00							
270	Packaging	0.00							
Packaging	Memo	0.00							
Packaging	Package as per PPP D350-636-012								
280		0.00							
280	QC21- Final Inspection - Work Order Release	0.00							
QC	Memo	0.00							
Quality Control									

2/1/38

CK 12/01/04.

M.L.J 12/01/03

①

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

December-06-11 10:29:57 AM

Page 1

Work Order ID: 77362

77362

Parent Item: D350-636-012

D350-636-012

Parent Item Name: Skidtube RH

Start Date: 06/12/2011

Required Date: 20/12/2011

Start Qty: 1.00

Required Qty: 1.00

Comments:

IPP Rev:102.09.25Rearranged procedure stepsKJ
 IPP Rev:J 06-03-29 As per Rev D EC
 IPP Rev:K 06-07.13 As per dsi9343 EC
 IPP Rev:L 07-07-28 Added SS Wearplates(Rev E) JLM Verified By:EC
 IPP Rev:M 08-04-22 update steps 4,13 DD verified by:EC
 IPP Rev:N 08-09-23 revF as per dwg DD verified by:ec IPP Rev:O
 10.06.22 revise seq110 DD verf:EC IPP Rev:P 10.10.01 as
 per IIN revH DD verf:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

ALS4-1032-225

Purchased

No

Each

1,796.000

38

AI S4-1032-225

**

Insert

Location

Loc Qty

Loc Code

ST281

1796

108696

271

110768

62

118386 ✓

858

118966

605

38

AN3C5A

Purchased

No

230

Each

1,278.000

34

34

AN3C5A

**

Bolt

Location

Loc Qty

Loc Code

FP

7

115835

7

ST350

1271

116419

28

117343

17

117764

49

117872

2

118451

175

119127

500

119749 ✓

500

34

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

December-06-11 10:29:57 AM

Work Order ID: 77362

77362

Parent Item: D350-636-012

D350-636-012

Parent Item Name: Skidtube RH

Start Date: 06/12/2011

Required Date: 20/12/2011

Start Qty: 1.00

Required Qty: 1.00

AN3C6A

Purchased

No

230

Each

318.0000

4

4

AN3C6A

BOLT

**

BL 11-12-29

Location

Loc Qty

Loc Code

FP

111982

1

ST351

317

111982

2

116419

23

116549

2

116704

12

117619

10

117688

1

117872

5

118422

62

119449

100

119749

100

AN6C44A

Purchased

No

230

Each

83.0000

4

4

AN6C44A

BOLT

**

BL 11-12-29

Location

Loc Qty

Loc Code

FG

2

103964

2

ST343

81

118985

40

119125

30

119530

11

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

December-06-11 10:29:57 AM

Page 3

Work Order ID: 77362

77362

Parent Item: D350-636-012

D350-636-012

Parent Item Name: Skidtube RH

Start Date: 06/12/2011

Required Date: 20/12/2011

Start Qty: 1.00

Required Qty: 1.00

AN8C35A

Purchased

No

230

Each

93.0000

1

1

AN8C35A

BOLT

**

BL 11-12-29.

Location

Loc Qty

Loc Code

FP

92

115960

1

117834

29

118286

62

ST346

1

114442

0

115188

0

115960

1

AN960C10L

NAS1149C0332 R

Purchased

No

230

Each

0.0000

38

38

*AN960C10I *

washer

D2745

Manufactured

No

230

Each

85.0000

8

8

D2745

Bushing

**

58

BL 11-12-29.

**

BL 11-12-29.

Location

Loc Qty

Loc Code

FP

85

69529

1

71835

12

74446

72

December-06-11 10:29:58 AM

Shop Packet Print

Page 3

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____
 Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

December-06-11 10:29:58 AM

Page 4

Work Order ID: 77362

77362

Parent Item: D350-636-012

D350-636-012

Parent Item Name: Skidtube RH

Start Date: 06/12/2011

Required Date: 20/12/2011

Start Qty: 1.00

Required Qty: 1.00

D3488-042

Manufactured No

230

Each

20.0000

1

1

D3488-042

Blade Fitting Assembly, RH

**

BK 11-12-29

Location

Loc Qty

Loc Code

FP002

20

62003

1

69904

2

71883

6

75068

11

D3492-1

Manufactured No

230

Each

110.0000

8

8

D3492-1

Plug

**

BK 11-12-29

Location

Loc Qty

Loc Code

FP-A

100

76235

100

FP-B

10

69531

8

74444

2

D3492-3

Manufactured No

230

Each

109.0000

8

8

D3492-3

Plug

**

BK 11-12-29

Location

Loc Qty

Loc Code

FP-A

40

76236

40

FP-B

69

74447

25

74871

44

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

December-06-11 10:29:58 AM

Page 5

13

Work Order ID: 77362

77362

Parent Item: D350-636-012

D350-636-012

Parent Item Name: Skidtube RH

Start Date: 06/12/2011

Required Date: 20/12/2011

Start Qty: 1.00

Required Qty: 1.00

D3535-25

Manufactured No

230

Each

27.0000

1

1

D3535-25

Wearshoe

**

BL 11-12-29

Location

Loc Qty

Loc Code

FP001

17

74525

5

75040

12

FP018

10

62233

1

74592

9

D3536-25

Manufactured No

230

Each

31.0000

1

1

D3536-25

Gasket

**

BL 11-12-29

Location

Loc Qty

Loc Code

FP012

31

74595

5

75039

26

D3537-1

Manufactured No

230

Each

100.0000

3

3

D3537-1

Wearpad

**

BL 11-12-29

Location

Loc Qty

Loc Code

FP002

95

74436

23

74867

72

FP017

5

69817

5

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

December-06-11 10:29:58 AM

Page 6

Work Order ID: 77362

77362

Parent Item: D350-636-012

D350-636-012

Parent Item Name: Skidtube RH

Start Date: 06/12/2011

Required Date: 20/12/2011

Start Qty: 1.00

Required Qty: 1.00

D3631-1

Manufactured No

230

Each

447.0000

8

8

D3631-1

Washer

**

BK 11-12-29.

Location

Loc Qty

Loc Code

ST072

447

68062

2

75548 ✓

445

D3791-1

Manufactured No

230

Each

31.0000

1

1

D3791-1

Wearplate

**

BK 11-12-29.

Location

Loc Qty

Loc Code

FP002

16

75041

16

FP017

15

62239

2

74527

1

74598 ✓

12

D3793-1

Manufactured No

230

Each

20.0000

1

1

D3793-1

Wearshoe

**

BK 11-12-29.

Location

Loc Qty

Loc Code

FP001

12

75038 ✓

12

FP018

8

74591

8

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

December-06-11 10:29:58 AM

Page 7
13

Work Order ID: 77362

77362

Parent Item: D350-636-012

D350-636-012

Parent Item Name: Skidtube RH

Start Date: 06/12/2011

Required Date: 20/12/2011

Start Qty: 1.00

Required Qty: 1.00

D3793-3 Manufactured No

230 Each

24.0000

1 1

D3793-3

Wearshoe

**

BL 11-12-29

Location

Loc Qty

Loc Code

FP001

24

74528 ✓

8

74593

4

75043

12

D3794-1 Manufactured No

230 Each

41.0000

1 1

D3794-1

Gasket

**

BL 11-12-29

Location

Loc Qty

Loc Code

FP014

41

74529

1

74594 ✓

12

75042

28

D3794-3 Manufactured No

230 Each

23.0000

1 1

D3794-3

Gasket

**

BL 11-12-29

Location

Loc Qty

Loc Code

FP002

23

74530

9

74596 ✓

14

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

December-06-11 10:29:58 AM

Page 8

Work Order ID: 77362

77362

Parent Item: D350-636-012

D350-636-012

Parent Item Name: Skidtube RH

Start Date: 06/12/2011

Required Date: 20/12/2011

Start Qty: 1.00

Required Qty: 1.00

MS21043-6 Purchased No

230 Each

425.0000

4

4

MS21043-6

NUT

**

BR 11-12-29

Location

Loc Qty

Loc Code

FG

20

103693

20

ST300

405

112314

195

117887

10

118384

200

MS21083C8 Purchased No

230 Each

78.0000

1

1

MS21083C8

NUT

**

BR 11-12-29

Location

Loc Qty

Loc Code

FP-B

1

115884

1

ST293

1

118077

1

ST303

76

115884

0

118614

23

119309

3

119436

25

119638

25

NAS1149C0832R Purchased No

230 Each

325.0000

1

1

NAS1149C0832R

WASHER

**

BR 11-12-29

Location

Loc Qty

Loc Code

ST297

325

114915

325

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

December-06-11 10:29:58 AM

Page 9

Work Order ID: 77362

77362

Parent Item: D350-636-012

D350-636-012

Parent Item Name: Skidtube RH

Start Date: 06/12/2011

Required Date: 20/12/2011

Start Qty: 1.00

Required Qty: 1.00

NAS1515H3L

Purchased

No

230

Each

131.0000

4

4

***NAS1515H3I ***

WASHER

**

BR 11-12-29

Location

Loc Qty

Loc Code

FG

40

102472

40

ST277

91

118686

3

119438 ✓

88

4.

NAS1611-010

Purchased

No

230

Each

183.0000

8

8

NAS1611-010

O-RING

**

BR 11-12-29

Location

Loc Qty

Loc Code

FP

183

110915

14

117460

8

118077

1

118612

3

119438

107

119623 ✓

50

8.

NAS1611-013

Purchased

No

230

Each

176.0000

8

8

NAS1611-013

O-RING

**

BR 11-12-29

Location

Loc Qty

Loc Code

FP

176

116582

5

117291

2

117887

53

119307

72

119438 ✓

2

119623

42

8.

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

December-06-11 10:29:58 AM

Page 10

Work Order ID: 77362

77362

Parent Item: D350-636-012

D350-636-012

Parent Item Name: Skidtube RH

Start Date: 06/12/2011

Required Date: 20/12/2011

Start Qty: 1.00

Required Qty: 1.00

AN8C21A

Purchased

No

250

Each

55.0000

2

AN8C21A

BOLT

**

Location

Loc Qty

Loc Code

ST343

55

118045

5

118758

20

119530

30

D2741

Manufactured

No

250

Each

38.0000

1

D2741

Blade, 350 Skidtube

**

Location

Loc Qty

Loc Code

ST

-4

71856

6

ST466

42

71856

32

D3493-1

Manufactured

No

250

Each

45.0000

2

D3493-1

Washer

**

Location

Loc Qty

Loc Code

ST062

45

70697

4

71846

11

76237

30

D3532-1

Manufactured

No

250

Each

42.0000

2

D3532-1

Spacer

**

Location

Loc Qty

Loc Code

ST065

42

73342

2

74880

40

December-06-11 10:29:58 AM

Shop Packet Print

Page 10

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

December-06-11 10:29:58 AM

Page 11

Work Order ID: 77362

77362

Parent Item: D350-636-012

D350-636-012

Parent Item Name: Skidtube RH

Start Date: 06/12/2011

Required Date: 20/12/2011

Start Qty: 1.00

Required Qty: 1.00

MS21083C8

Purchased

No

250

Each

78.0000

2

2

**

MS21083C8

NUT

Location

Loc Qty

Loc Code

FP-B

1

115884

1

ST293

1

118077

1

ST303

76

115884

0

118614

23

119309

3

119436

25

119638

25

NAS1149D0863J

Purchased

No

250

Each

192.0000

2

2

**

NAS1149D0863J

WASHER

Location

Loc Qty

Loc Code

ST298

192

118078

92

119307

100

D2600-3-BENT

Manufactured

No

110

Each

17.0000

1

**

D2600-3-BENT

Extrusion Bent

Location

Loc Qty

Loc Code

LG

17

66875

8

73253

1

75021

1

75022

6

75023

1

December-06-11 10:29:58 AM

Shop Packet Print

Page 11

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

December-06-11 10:29:58 AM

Page 12

Work Order ID: 77362

77362

Parent Item: D350-636-012

D350-636-012

Parent Item Name: Skidtube RH

Start Date: 06/12/2011

Required Date: 20/12/2011

Start Qty: 1.00

Required Qty: 1.00

D2744

Manufactured No

110

Each

41.0000

1

1

D2744

**

BE11-12-12

Cap

Location

Loc Qty

Loc Code

LG002

41

62715

1

70881

12

71861

28

D2739

Manufactured No

160

Each

13.0000

1

1

D2739

**

BE 11-12-19

350 I Beam

Location

Loc Qty

Loc Code

LG

13

72155

1

76866

1

76867

3

76987

8

D2743

Manufactured No

160

Each

225.0000

8

8

D2743

**

BE11-12-20

Crossbolt Spacer

Location

Loc Qty

Loc Code

LG

218

73403

64

74445

100

76141

54

LG001

7

67766

4

68251

3

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

December-06-11 10:29:58 AM

Page 13

Work Order ID: 77362

77362

Parent Item: D350-636-012

D350-636-012

Parent Item Name: Skidtube RH

Start Date: 06/12/2011

Required Date: 20/12/2011

Start Qty: 1.00

Required Qty: 1.00

D3490-3 Manufactured No

160 Each

50.0000

4 4

D3490-3

Cross Bolt Spacer

**

BE 11/12/20

Location

Loc Qty

Loc Code

LG001

50

74877

40

76234

10

4

D3490-1 Manufactured No

160 Each

61.0000

4 4

D3490-1

Cross Bolt Spacer

**

BE 11/12/20

Location

Loc Qty

Loc Code

LG001

61

62450

2

67773

4

74875

55

4

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____
 Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

QTY -041	QTY -042	QTY -043	QTY -044	PART NUMBER	DESCRIPTION
X				D2750-041	350 SKIDTUBE ASSEMBLY, LH
	X			D2750-042	350 SKIDTUBE ASSEMBLY, RH
		X		D2750-043	350 SKIDTUBE ASSEMBLY, LH
			X	D2750-044	350 SKIDTUBE ASSEMBLY, RH
1	1	1	1	D2739	WEB
8	8	8	8	D2743	SPACER
1	1	1	1	D2744	CAP
8	8	8	8	D2745	BUSHING
1				D2750-1	SKIDTUBE WELDMENT, LH
	1			D2750-2	SKIDTUBE WELDMENT, RH
		1		D2750-3	SKIDTUBE WELDMENT, LH
			1	D2750-4	SKIDTUBE WELDMENT, RH
1		1		D3488-041	BLADE FITTING, LH
	1		1	D3488-042	BLADE FITTING, RH
4	4	4	4	D3490-1	SPACER
4	4			D3490-3	SPACER
		4	4	D3490-5	SPACER
8	8	8	8	D3492-041	PLUG ASSEMBLY
8	8			D3492-043	PLUG ASSEMBLY
		8	8	D3492-045	PLUG ASSEMBLY
1	1	1	1	D3535-25	WEARSHOE
1	1	1	1	D3536-25	GASKET
3	3	3	3	D3537-1	WEARPAD
8	8	8	8	D3631-1	WASHER
1	1	1	1	D3791-1	WEARPLATE
1	1	1	1	D3793-1	WEARSHOE
1	1	1	1	D3793-3	WEARSHOE
1	1	1	1	D3794-1	GASKET
1	1	1	1	D3794-3	GASKET
38	38	38	38	ALS4-1032-225	INSERT (OR ALS7-1032-225, AKS4-1032-225, AELS-1032-225)
34	34	34	34	AN3C5A	BOLT
4	4	4	4	AN3C6A	BOLT
4	4	4	4	AN6C44A	BOLT
1	1	1	1	AN8C35A	BOLT
38	38	38	38	AN960C10L	WASHER
1	1	1	1	AN960C816L	WASHER
4	4	4	4	MS21043-6	NUT
1	1	1	1	MS21083C8	NUT
4	4	4	4	NAS1515H3L	WASHER

GENERAL NOTES:

- 1) MATERIAL: MAKE D2750-1/-2/-3/-4 FROM D2600-3 EXTRUSION (INITIAL LENGTH = 120.0).
- 2) FINISH:
ACID ETCH, ALONDE ASSEMBLY PER DART QSI 005 4.1 PRIOR TO INSTALLING D2739 WEB.
POWDER COAT WHITE (REF. 4.3.5.1) PER DART QSI 005 4.3
BLACK ANTI-SKID PAINT AS INDICATED TO 1.0 ABOVE SKIDTUBE CENTER-LINE PER DART 005 4.4 (OPTIONAL).
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: D2750-041/-042/-043/-044 = 26.5 LBS
- 8) WELD PER DART QSI 004
- 9) INSTALL ALS4-1032-225 INSERTS AFTER FINISH AS INDICATED. DRILL 'F' SIZE HOLES ($\phi 0.297$) FOR WEARSHOE INSERTS
- 10) FINAL CONFIGURATION SHOULD HAVE THE FOLLOWING MINIMUM MECHANICAL PROPERTIES:
MINIMUM YIELD TENSILE STRENGTH = 35 KSI
MINIMUM ULTIMATE TENSILE STRENGTH = 38 KSI
- 11) SPRAY INSIDE OF TUBE WITH A COAT OF LPS LABORATORIES "LPS-3" AFTER FINISH AND AFTER INSTALLATION OF INSERTS.
COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY. CLEAN EXCESS OFF
POWDER COATING WITH MEK DEGREASER.
- 12) SPACER AND PLUG INSTALLED SAME AS SECTION AJ-AJ EXCEPT HORIZONTAL Δ
- 13) SPACER AND PLUG INSTALLED SAME AS SECTION AP-AP EXCEPT HORIZONTAL Δ

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT

WITHOUT NOTICE
WORK ORDER

NO. 77362 M.C.J
11/12/06

RELEASED
68-07-12-14

F	INCORPORATE DSI 9413; QTY (3) D3537-1 WAS QTY (5) (ZN C8-1); D3791-1/3 REPLACES D3535-13/35 (ZN C8-1); D3794-1/3 REPLACES D3536-13/35 (ZN B8-1); ADD D3791-1 (ZN C8-1); WEARSHOE HOLES UNDER FWD/AFT SADDLE REMOVED (8 PL). WEARSHOE HARDWARE QTY UPDATED (ZN B8-1); D3488-041/-042 HARDWARE UPDATED (ZN C1-8, 9, 10, 11); ADD NOTE 12 AND 13 (ZN A6-1); REASON: REF. NCR 08-043	PH	08.07.16
E	CHANGE TO STAINLESS STEEL WEARPLATES; ADD RUBBER GASKETS. CHANGE INSERTS; ADD D3631-1; REMOVE QTY (38) NAS1515H3L; REMOVE QTY (10) NAS1515H6L; REMOVE D2741; QTY (2) AN960C816; REMOVE QTY (2) MS21083C8	CB	07.05.17
D	ADD HOLES AND SPACERS FOR APICAL FLOATS; INCORPORATE DEO 9133/9157	PH	06.01.05
C	ADD D2750-3/D2750-4; INCORPORATE D2738 AND D2740	CP	98.11.18
B	CHANGE MS24694-S293 TO AN8-16A	CP	98.09.01
A	NEW ISSUE	DS	98.04.16
REV.	DESCRIPTION	BY	DATE
DESIGN	Δ	DART AEROSPACE USA, INC. PORT HADLOCK, WA	
DRAWN	Δ		
CHECKED	Δ	DRAWING NO.	REV. F
MFG. APPR.	Δ	D2750	SHEET 1 OF 11
APPROVED	Δ	TITLE	SCALE
DE APPR.	Δ	350 SKIDTUBE ASSEMBLY	NTS
DATE	08.07.16	COPYRIGHT © 1998 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

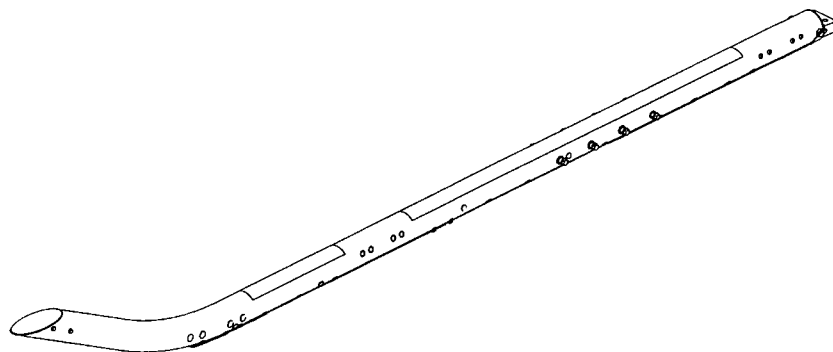
Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

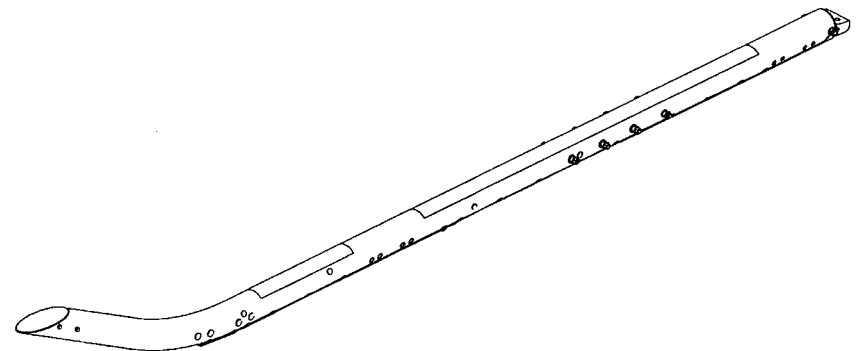
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

77362



D2750-041 350 SKIDTUBE ASSEMBLY, LH



D2750-042 350 SKIDTUBE ASSEMBLY, RH

RELEASED
8-9-22 AM

DESIGN	PCY	DART AEROSPACE USA, INC.	
DRAWN	RM	PORT HADLOCK, WA	
CHECKED	RA	DRAWING NO.	REV. F
MFG. APPR.	MA	D2750	SHEET 2 OF 11
APPROVED	MA	TITLE	SCALE
DE APPR.	MA	350 SKIDTUBE ASSEMBLY	NTS
DATE	08.07.16	COPYRIGHT © 1988 BY DART AEROSPACE USA, INC. <small>THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.</small>	

Dart Aerospace Ltd

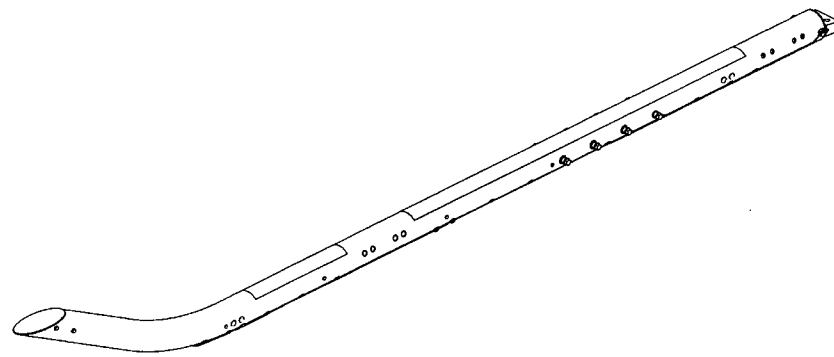
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____
Resolution: _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

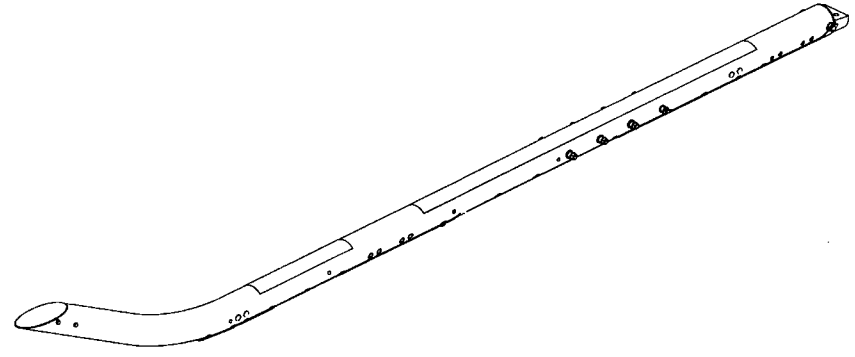
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

77362



D2750-043 350 SKIDTUBE ASSEMBLY, LH



D2750-044 350 SKIDTUBE ASSEMBLY, RH

RELEASED
68-09-22/111

DESIGN	PH	DART AEROSPACE USA, INC.	
DRAWN	PH	PORT HADLOCK, WA	
CHECKED	PH	DRAWING NO.	REV. F
MFG. APPR.	PH	D2750	SHEET 3 OF 11
APPROVED	PH	TITLE	SCALE
DE APPR.	PH	350 SKIDTUBE ASSEMBLY	NTS
DATE	08.07.16	COPYRIGHT © 1988 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

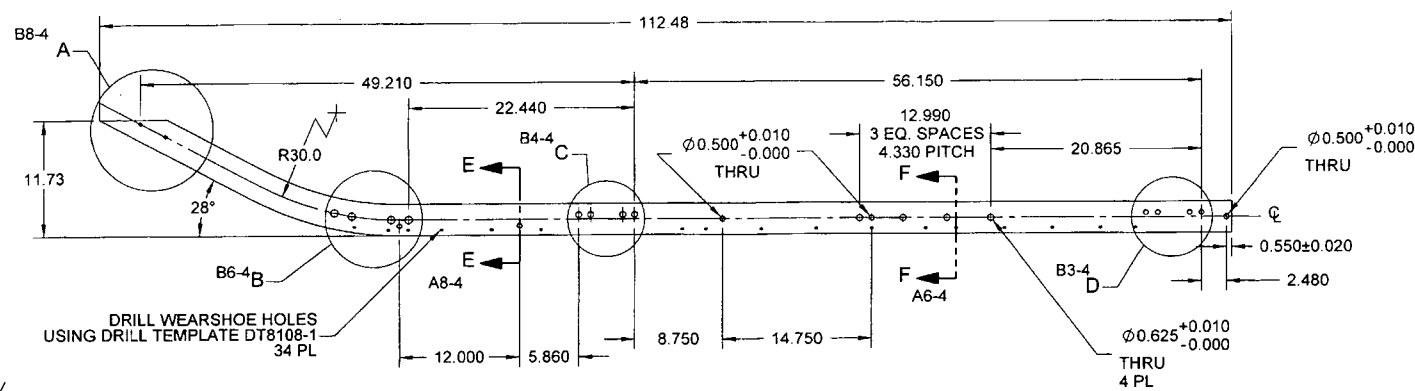
Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

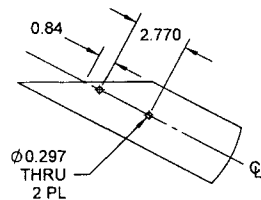
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

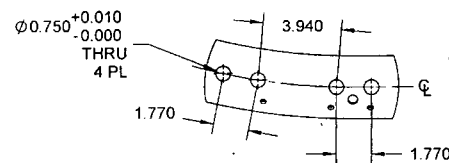
77362



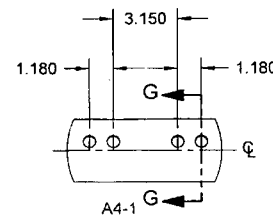
D2750-1 LH SKIDTUBE



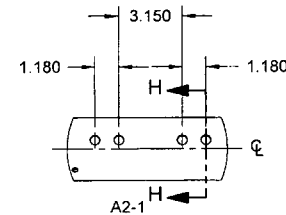
DETAIL A
SCALE 2X



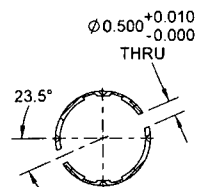
DETAIL B
SCALE 2X



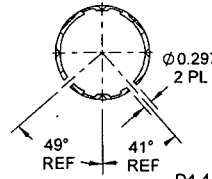
DETAIL C
SCALE 2X



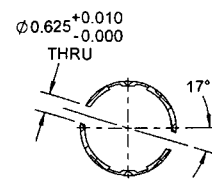
DETAIL D
SCALE 2X



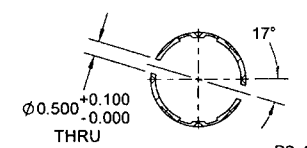
SECTION E-E
SCALE 3X, 2 PL



SECTION F-F
SCALE 3X, 17 PL






SECTION G-G
SCALE 3X, 4 PL



SECTION H-H
SCALE 3X, 4 PL

RELEASED

DESIGN	PH	DART AEROSPACE USA, INC.	
DRAWN	PH	PORT HADLOCK, WA	
CHECKED		DRAWING NO.	REV. F
MFG. APPR.		D2750	SHEET 4 OF 11
APPROVED		TITLE	SCALE
DE APPR.		350 SKIDTUBE ASSEMBLY	NTS
DATE	08.07.16	COPYRIGHT © 1998 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL. AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

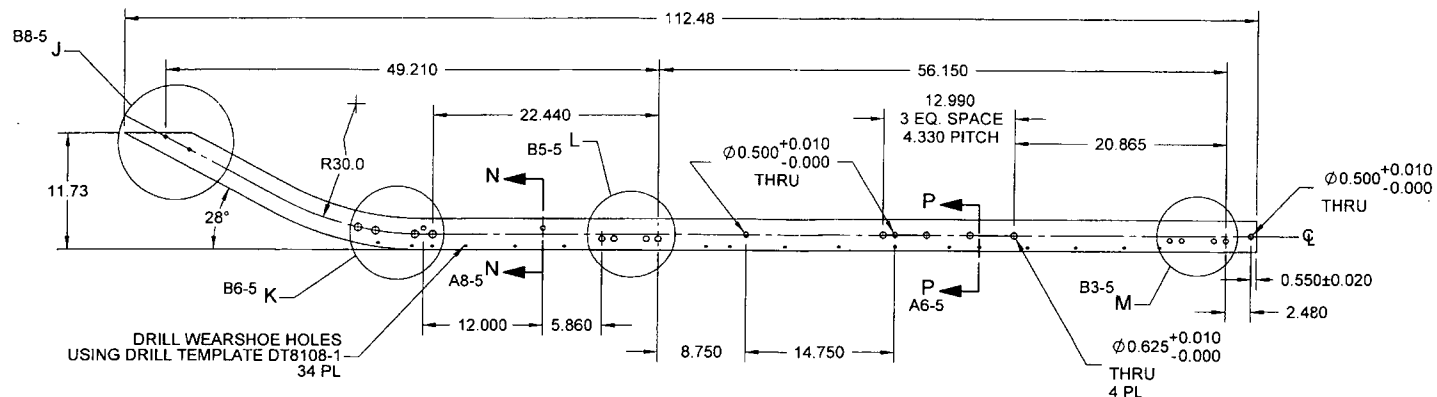
Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

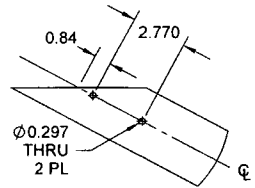
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

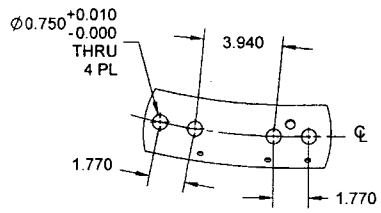
77362



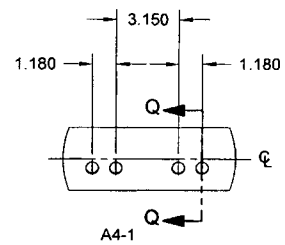
D2750-2 RH SKIDTUBE



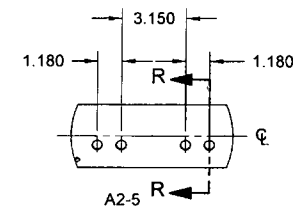
DETAIL J
SCALE 2X



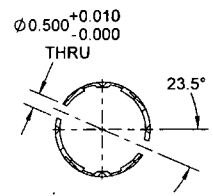
DETAIL K
SCALE 2X



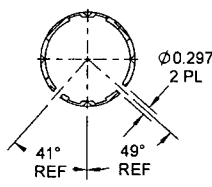
DETAIL L
SCALE 2X



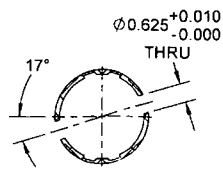
DETAIL M
SCALE 2X



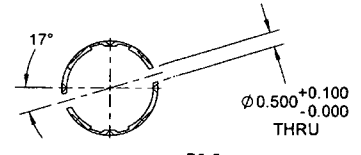
SECTION N-N
SCALE 3X, 2 PL



SECTION P-P
SCALE 3X, 17 PL



SECTION Q-Q
SCALE 3X, 4 PL



SECTION R-R
SCALE 3X, 4 PL

RELEASED

DESIGN	PA	DART AEROSPACE USA, INC.	
DRAWN	PA	PORT HADLOCK, WA	
CHECKED		DRAWING NO.	REV. F
MFG. APPR.		D2750	SHEET 5 OF 11
APPROVED		TITLE	SCALE
DE APPR.		350 SKIDTUBE ASSEMBLY	NTS
DATE	08.07.16	<small>COPYRIGHT © 1998 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.</small>	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

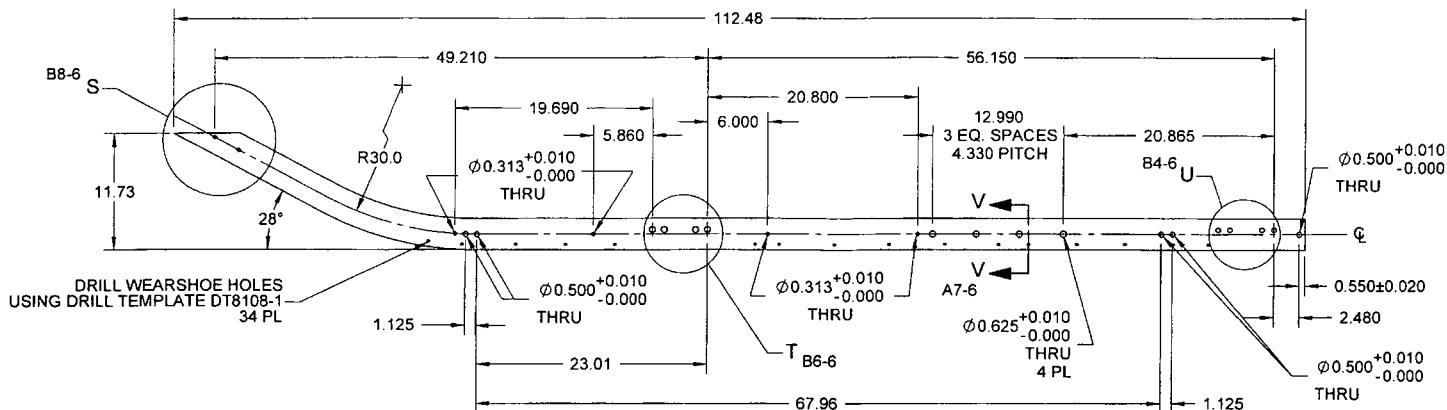
Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

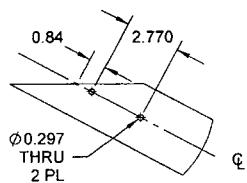
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

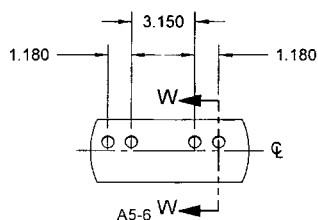
77362



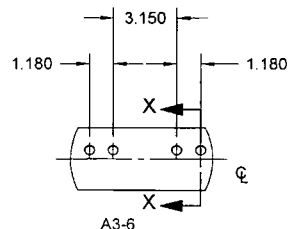
D2750-3 LH SKIDTUBE



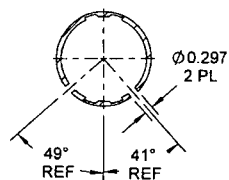
DETAIL S
D8-6
SCALE 2X



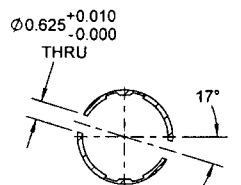
DETAIL T
C5-6
SCALE 2X



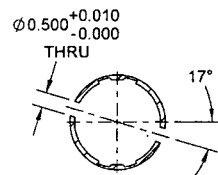
DETAIL U
D3-6
SCALE 2X



SECTION V-V
C4-6
SCALE 3X, 17 PL



SECTION W-W
B6-6
SCALE 3X, 4 PL



SECTION X-X
B4-6
SCALE 3X, 4 PL

RELEASED
08 JUL 1988

DESIGN		DART AEROSPACE USA, INC.	
DRAWN		PORT HADLOCK, WA	
CHECKED		DRAWING NO.	REV. F
MFG. APPR.		D2750	SHEET 6 OF 11
APPROVED		TITLE	SCALE
DE APPR.		350 SKIDTUBE ASSEMBLY	NTS
DATE	08.07.16	<small>COPYRIGHT © 1988 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.</small>	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

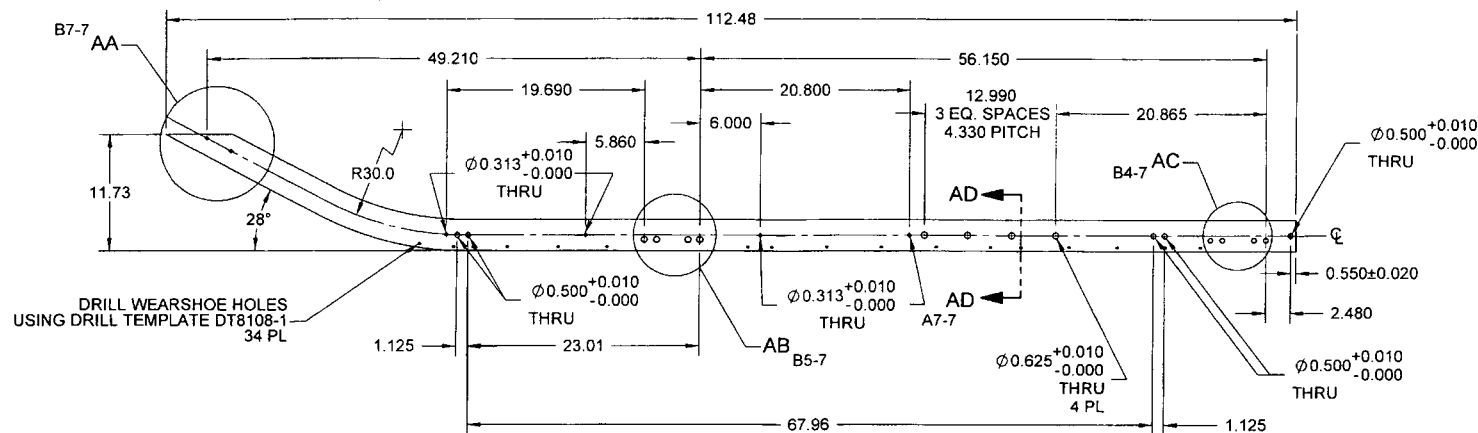
Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

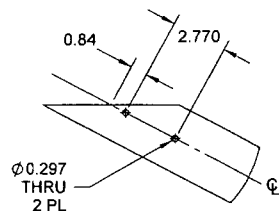
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

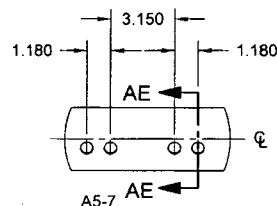
77362



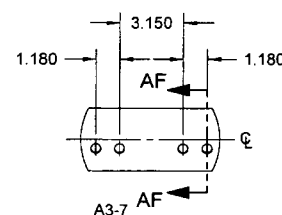
D2750-4 RH SKIDTUBE



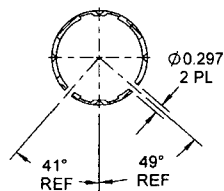
DETAIL AA
SCALE 2X



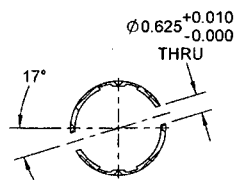
DETAIL AB
SCALE 2X



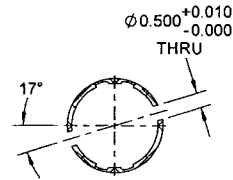
DETAIL AC
SCALE 2X



SECTION AD-AD
SCALE 3X, 17 PL



SECTION AE-AE
SCALE 3X, 4 PL



SECTION AF-AF
SCALE 3X, 4 PL

RELEASED

DESIGN		DART AEROSPACE USA, INC.	
DRAWN		PORT HADLOCK, WA	
CHECKED		DRAWING NO.	REV. F
MFG. APPR.		D2750	SHEET 7 OF 11
APPROVED		TITLE	SCALE
DE APPR.		350 SKIDTUBE ASSEMBLY	NTS
DATE	08.07.16	<small>COPYRIGHT © 1998 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.</small>	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

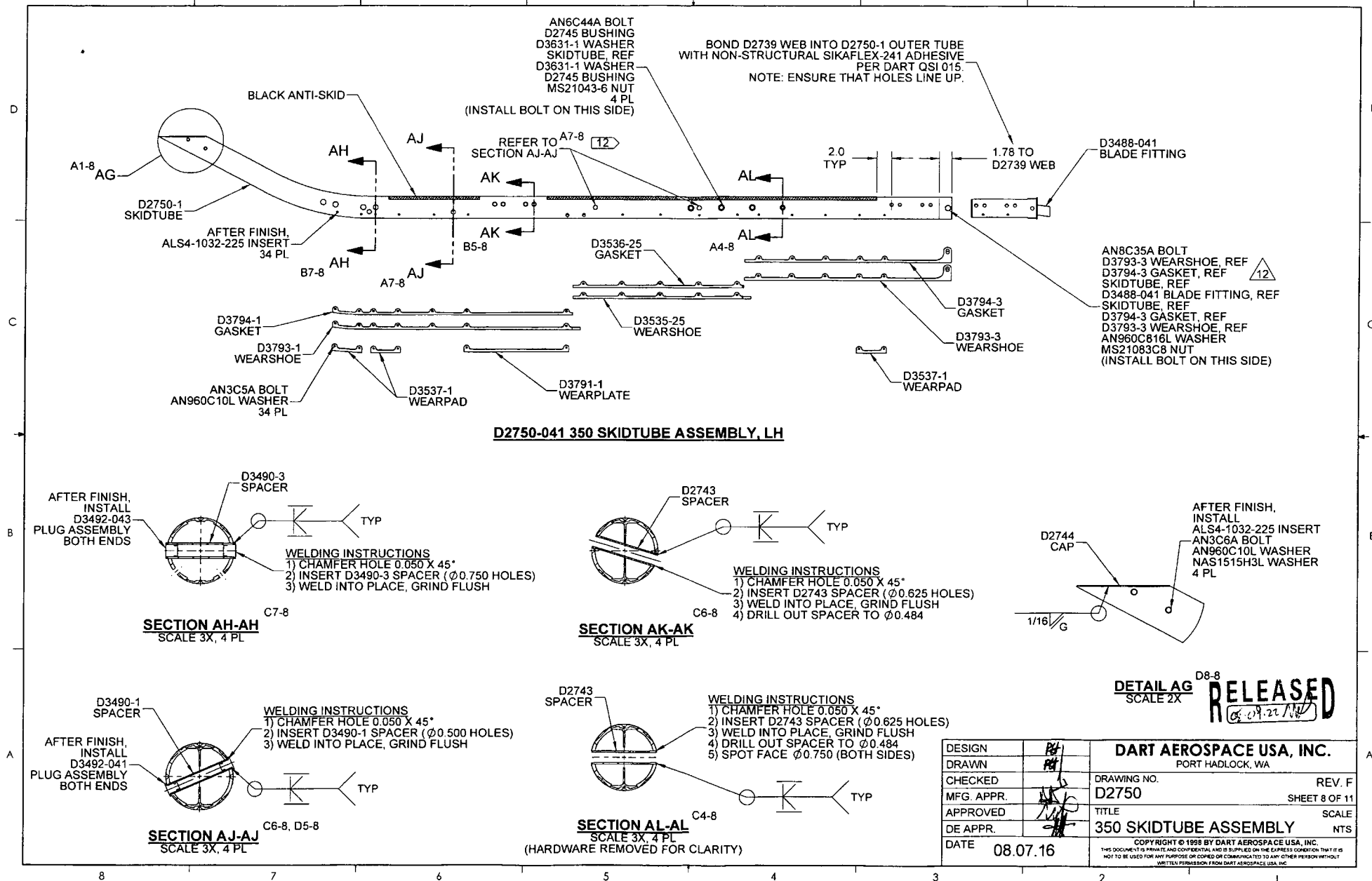
Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

77362



DESIGN	REV. F	DART AEROSPACE USA, INC.	
DRAWN	REV. F	PORT HADLOCK, WA	
CHECKED	REV. F	DRAWING NO.	REV. F
MFG. APPR.	REV. F	D2750	SHEET 8 OF 11
APPROVED	REV. F	TITLE	SCALE
DE APPR.	REV. F	350 SKIDTUBE ASSEMBLY	NTS
DATE	08.07.16	COPYRIGHT © 1998 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

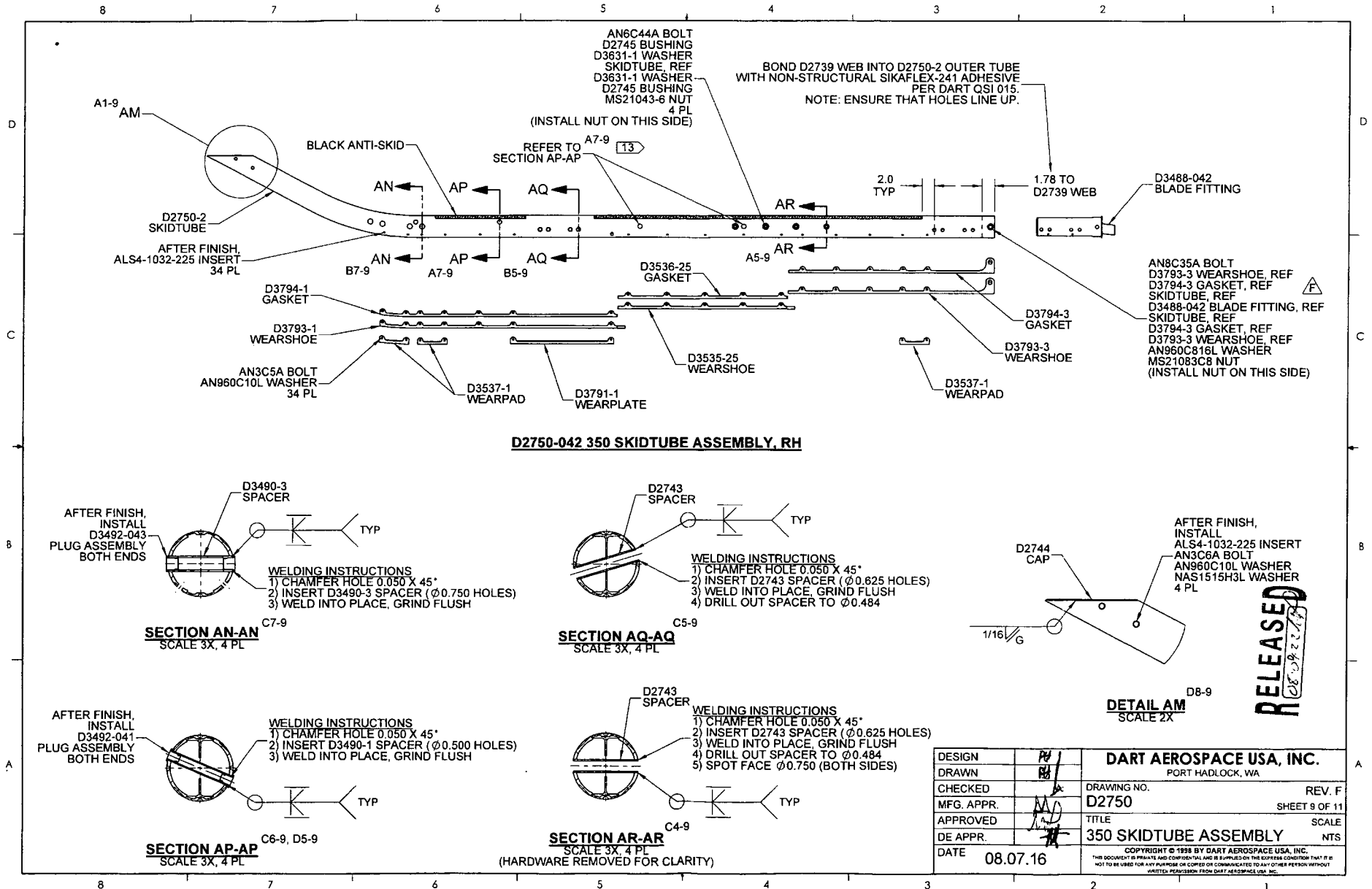
Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

77362



DESIGN	PH	DART AEROSPACE USA, INC.	
DRAWN	PH	PORT HADLOCK, WA	
CHECKED		DRAWING NO.	REV. F
MFG. APPR.		D2750	SHEET 9 OF 11
APPROVED		TITLE	SCALE
DE APPR.		350 SKIDTUBE ASSEMBLY	NTS
DATE	08.07.16	COPYRIGHT © 1995 BY DART AEROSPACE USA, INC. <small>THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.</small>	

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

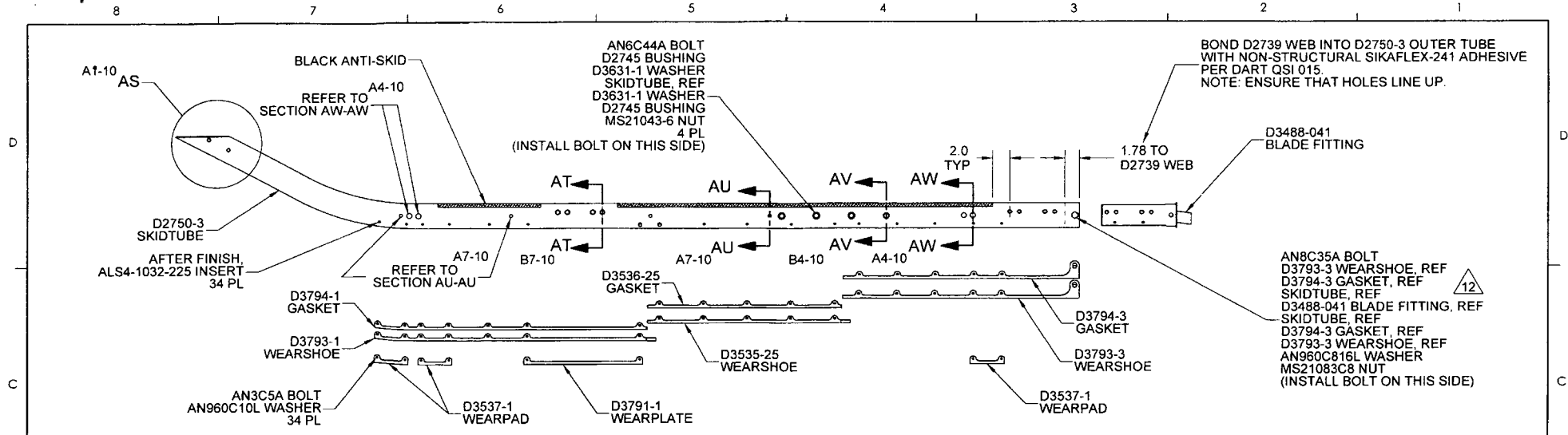
Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

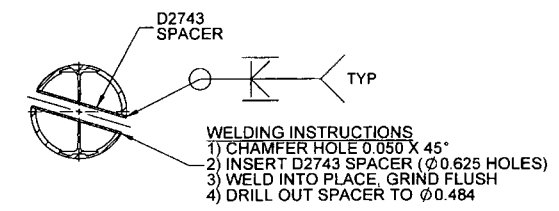
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

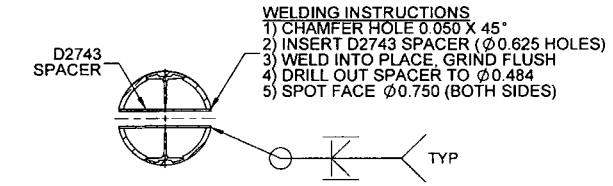
77362



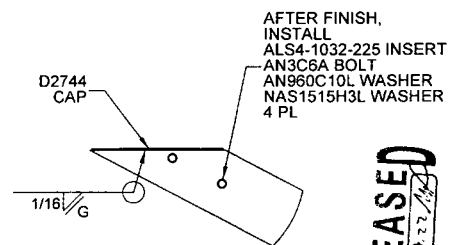
D2750-043 350 SKIDTUBE ASSEMBLY, LH



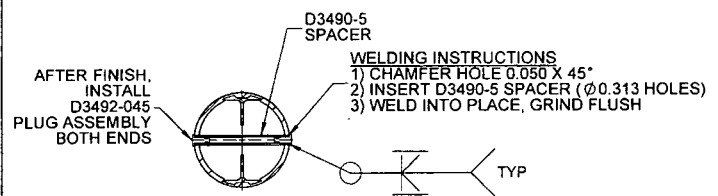
SECTION AT-AT
SCALE 3X, 4 PL



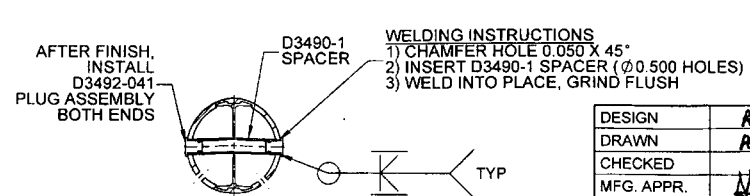
SECTION AV-AV
SCALE 3X, 4 PL
(HARDWARE REMOVED FOR CLARITY)



DETAIL AS
SCALE 2X



SECTION AU-AU
SCALE 3X, 4 PL



SECTION AW-AW
SCALE 3X, 4 PL

DESIGN	RE	DART AEROSPACE USA, INC.	
DRAWN	RE	PORT HADLOCK, WA	
CHECKED		DRAWING NO.	REV. F
MFG. APPR.		D2750	SHEET 10 OF 11
APPROVED		TITLE	SCALE
DE APPR.		350 SKIDTUBE ASSEMBLY	NTS
DATE	08.07.16	<small>COPYRIGHT © 1988 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.</small>	

RELEASED
2015-08-22/10/16

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

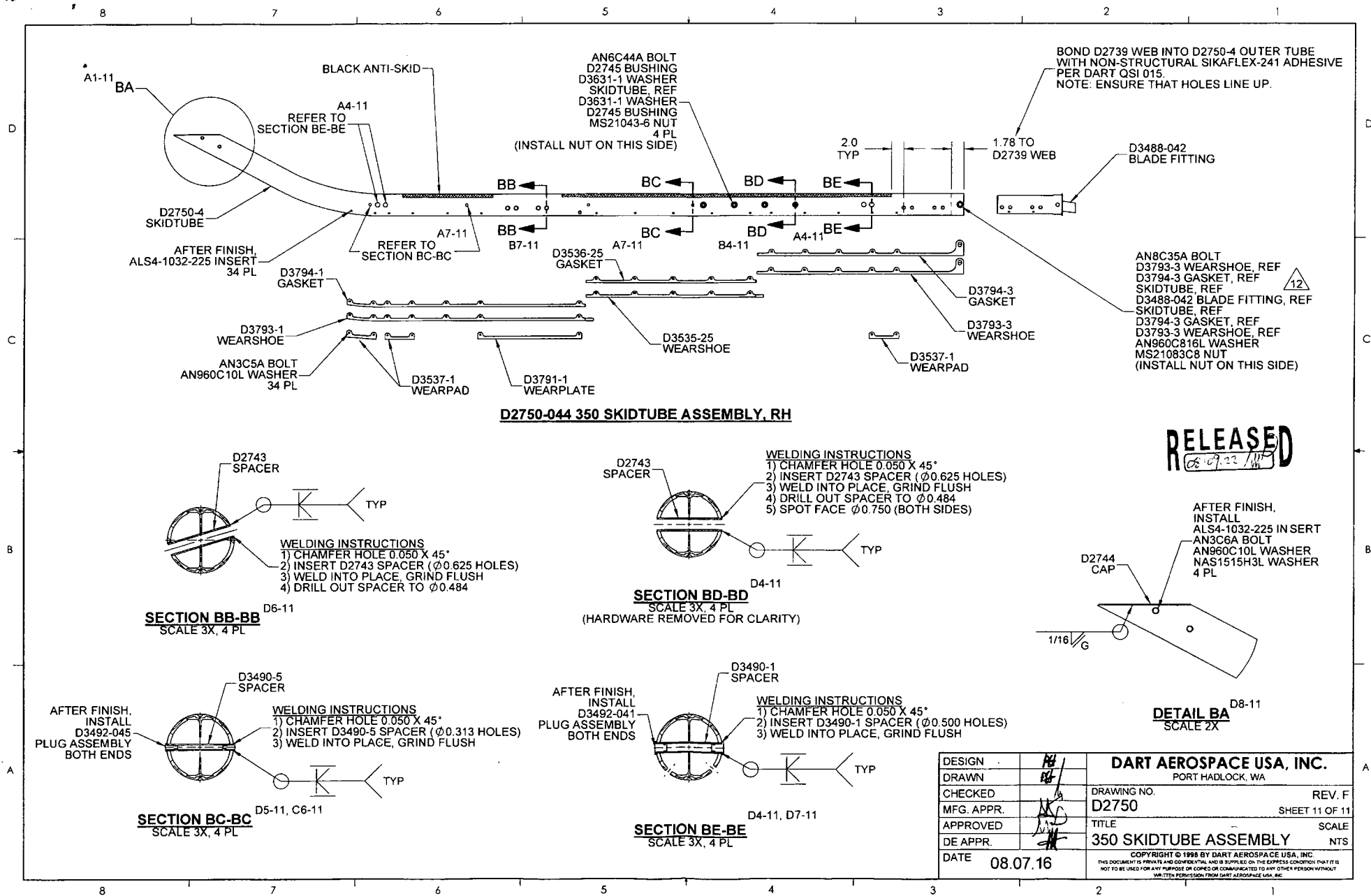
Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

77362



DESIGN	HA	DART AEROSPACE USA, INC.	
DRAWN	HA	PORT HADLOCK, WA	
CHECKED	HA	DRAWING NO.	REV. F
MFG. APPR.	HA	D2750	SHEET 11 OF 11
APPROVED	HA	TITLE	SCALE
DE APPR.	HA	350 SKIDTUBE ASSEMBLY	NTS
DATE	08.07.16	COPYRIGHT © 1998 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COMMERCE OR COMMUNICATION TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

NO. 279

AWS D17.1.2001
QUALIFICATION TEST RECORD

Name: Barclay Elliott
Job number: 77362
Part number: D 350 636 012
Description: 350 skidsteer
Welding Process: Tig ☒ Mig ☐
Base material: aluminum
Current: AC ☒ DC ☐

TEST REQUIREMENTS AND RESULTS

Visual: pass ☒ fail ☐
Penetration: pass ☒ fail ☐

UNACCEPTABLE

Cracks: pass ☒ fail ☐
Undercut: pass ☒ fail ☐
Pin holes: pass ☒ fail ☐
Overlap (cold lap): pass ☒ fail ☐
Porosity (surface): pass ☒ fail ☐
Coloration: pass ☒ fail ☐

Qualifier Pat Lewis Date of Test Coupon 11.12.22

Welder Barclay Elliott Date of Test Coupon 11.12.22

The above named individual is qualified in accordance with AWS D17.1.2001 to weld